

Abstract of the Invention

- Using a plurality of relatively narrowband light sensors having overlapping response characteristics, accurate and self-calibrating colour measurements may be carried out. With sufficient measurements, simultaneous equations may be solved to derive a light intensity measurement at portions of the spectrum at which the overlapping sensor responses intercept. Using LEDs as light sensors provides cheap narrowband sensors and provides the additional advantage that the LEDs may also be used to illuminate a source to provide additional cross-reference measurements.
- 10 Using sensors and/or illumination sources directed at several angles may also be used to improve sensing accuracy by mitigating the effects of surface texture and/or fluorescence.